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ABSTRACT

This study was one of the first in the field of school activities to combine psychological variables with previously researched personal variables to attempt to answer questions raised by Rehberg in 1969. It produced psychological profiles of students who participate in school activities; it also dispelled the myth that school activities appeal equally to every student and that school activities are used by large numbers of students to complete their high school life experience. The information provided by the study can be used by researchers to explore the area of student involvement in school life and by administrators to assess who participates in their programs as they try to measure the success or failure of tax dollars spent yearly to develop extra- and co-curricular programs. (Author)

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The Relationship of Various Aspects of Student Self Concept and Selected Personal Variables to Participation in Various Types of School Activities

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The Relationship of Various Aspects of Student Self Concept and Selected Personal Variables to Participation in Various Types of School Activities

Background of the Problem

This study explored the relationship between various aspects of self-concept and student participation in the extra- and co-curricular activity programs of several central Pennsylvania high schools. The study was a marked departure from previous studies because it combined psychological variables with personal and sociological variables in its examination of student participation. Schools spend thousands of tax dollars annually in setting up and financing activity programs; however, school administrators rarely have information as to what segments of the school population participate in these activities. This study explored both known and hypothesized indicants of participation to supply administrators and researchers with this type of information.

Unlike their European counterparts, American schools have stressed extra- and co-curricular activities as an integral part of the school program (Graham, 1964). Whether these activities, athletic and non-athletic alike, stressed the ideals of mutual cooperation, guidance, practice for social development or arousal of interest in the community (Yon, 1963), they have been incorporated into what Frederick (1959) described as the "third curriculum."

Graham (1964) pointed out that these activities were devised to make school interesting to those youngsters whom society desired to have remain in school and out of the labor market as well as to take up the time of those whose chores (e.g., required minor agricultural work around the home) were removed by increasing urbanization of American society. She added that the activities continued to grow as the parents began to enjoy seeing their children "perform." The children themselves became eager to participate when they began to enjoy the activities more than they did school. The activities became self-perpetuating.

Despite some recognition of the student's desire to participate for reasons of his own (e.g., the desire to accommodate the performance expectations of his parents as well as his classmates), researchers who have examined student activity programs have failed to examine the psychological basis for adolescent participation. Research in the field has been guided by a belief that sociological reasons have been the only ones which have influenced students' extra- and co-curricular activities.

The basic rationale for undertaking a study of the interaction between psychological variables and participation in extra- and co-curricular activities may be found in Rehberg's article (1969) on student participation in interscholastic sports. After reviewing the literature which compared participation with educational goals and achievement in academics, Rehberg (1969, p. 75) claimed that:

> It is plausible that some or all of the apparent positive association between educational pursuits and athletics results from joint association of each of these variables (academic achievement, goal aspiration and participation in sports) not with each other but with one or more antecedent variables common to both.

One such antecedent variable suggested by Rehberg was self-esteem, which he defines as a "positive self-image."

Later in the same article, Rehberg (1969, p. 78) stated:

> The more positive the adolescent's self-esteem, the more likely would he be to set high academic and career standards for himself. To the extent that competence in sports elicits positive appraisals from significant others, to that extent, participation in sports may well serve to enhance the self-esteem of the participant adolescent and therefore raise his scholastic performance and educational experience.

Rehberg, however, failed to carry this hypothesis into non-athletic experiences of the school activity program.

Rehberg's recognition that the internal psychology may be an important impetus for participation brought forth the necessity of conducting research in this area to test his hypothesis. Rehberg was the first educational researcher in this area to urge an examination of something other than sociological perspectives of student participation in the school activity program.

Statement of Significance

There were four reasons for the necessity for this study.

First, all high schools have created some form of a school-supported activities program. In order to allow these programs to serve the needs of the students, information as to what motivates a student to enter these programs must be found.

Second, there have been few comprehensive studies of American adolescent sub-cultures in relationship to school activity program participation since Coleman probed this area in his 1957-58 study. American society and the schools have undergone great changes since then. The advent of the Vietman War, increased federal aid to education, bussing, changing viewpoints as to school philosophy and the introduction of students' bills of rights have markedly changed the structure and scope of the American high school over the past 15 years. We must conduct research to see how these changes have effected the youth who are going through our schools. Despite the fact that many of the variables identified by Coleman (1961) still exhibit significance in studies conducted on adolescent sub-cultures, decisions in schools cannot be made using research which is 17 years old.

Third, most of the research involving school activities has been conducted from a sociological viewpoint. It was indeed time to examine the psychological variables which contribute to what Rehberg (1969) called "intervening" variables (variables which are temporally antecedent to grades or educational expectations) and their effects in correlational studies.

Fourth, most of the studies in this field have been limited to same samples drawn from one high school; little generalization can be made from such reports. Studies are needed which include several schools in order to examine the prevalence of the variables throughout larger student populations.

This research was, however, limited to a sample of 459 senior high school students from 5 central Pennsylvania secondary schools; consequently its generalizability

beyond the population is at best tenuous. Second, although 17 schools were invited to participate in the study, actual inclusion was by self-selection. Third, since this was an ex post facto study, causal relationships could not be determined. Finally, the study did not fall into the common ex post facto trap of attempting to examine the effect of only one independent variable on a dependent variable; it was limited to the examination of several hypotheses.

Review of Literature and Related Research

The pattern for the sociologically-based research into school activities was established in the late 1940's with the publication of Havinghurst and Taba's (1949) text on adolescent behavior. The authors indicated that (p. 36):

> To achieve success in adolescent peer culture a boy or girl must stay in school, be a reasonably good student, (and) take part in school activities.... In the process of adjusting in those ways, he would be nearing middle-class morality.

From this point in time, the major studies of adolescent behavior (Hollingshead, 1949; Stendler, 1949; Taba, 1955; Coleman, 1961; Mussen, Conger, and Kagan, 1969) have stressed social and economic factors, while almost completely ignoring any psychological contributions which might show some influence on participation in the school activity programs.

During the 1950's and 1960's researchers suggested that participation was correlated with academic achievement as reflected by the student's grade point average. Frederick (1959) in his text, The Third Curriculum, reviewed the literature in this area back to studies of the 1920's and 1930's which showed that students who were most active in the activity programs tended to receive the highest grades in academic studies. Studies also showed that participation in activities had no negative effects on academic achievement.

In this tradition Eidsome (1963), Bourgon (1967), and Wertz (1967) conducted limited sample studies to assess the hypothesized relationship between academic

achievement and activity (athletic as well as non-athletic) participation. Each study showed that students who fared better academically were also the most frequent participators in various aspects of the school activity programs and that participators did better academically than did non-participators.

Reflecting Coleman's idea (1961) that participation in activities of the school was a function of membership in the "leading crowd" of high school society, researchers viewed participation as a function of the high school tracking systems (college preparatory, vocational, etc.) and student aspirations concerning further education. McCray (1967), Schafer (1971), Spady (1971), Nichols (1973) and Rehberg and Schafer (1973) all reported that students enrolled in the college bound programs and those expressing high aspirations for post-high school education or training were found to be the greatest participators in extra- and co-curricular activities.

If these viewpoints were valid; i.e., track membership and its obvious relationship to student aspiration were determiners of participation, then the opposite would also be true, i.e., students not included in the high school leading crowd (delinquents and dropouts) would be non-participants. Support for this hypothesis can be found in Bell (1967), Polk and Halferty (1970) and Schafer (1973B).

In the 1960's and early 1970's researchers continued to turn away from the child himself and to concentrate on background areas which were believed to influence participation. Eventually, however, some researchers began to seek psychological reasons for participation in the school activity programs even though they did not have the background support for their research as did the sociological researchers who had relied upon studies such as Coleman's and Hollingshead's. This novel research fit into what Kerlinger (1973) described as the heuristic model: research leading to further theory, further discovery and further investigation.

As might be expected, the largest group of studies centered on high school athletics. Smith (1964), Schendel (1965) and Koenig (1969) all found positive relationships

between sports participation and stable personality profiles from several psychological measures. It was at this time that Rehberg's (1969) article, "Behavioral and Attitudinal Consequences of High School Interscholastic Sports: A Speculative Consideration," appeared in Adolescence. Rehberg stressed the need to investigate intervening variables (those which were temporally consequent to participation or non-participation and temporally antecedent to grades or educational expectations) and their contributions to the relationship between such factors as participation, grades and aspiration. This study examined in detail one of Rehberg's intervening variables, positive self-image, and its relationship to several variables suggested by the Rehberg article.

The only study reported in the literature that examined the relationship between self-concept and participation in the school activity program appeared in 1969. Using the Osgood Semantic Differential, an instrument composed of pairs of adjectives arranged on a scale ranging from 1 to 7 on the continuum, and an activities checklist, Phillips (1969) studied 199 students in a Michigan high school to determine the relationship between participation in activities and self-concept. He discovered that participation in the activity program was significantly related to self-concept score for boys, but not for girls nor for the total sample. No significant relationship was found for girls between participation in any activity and scores on the self-concept measure.

An initial conjecture of the Phillips's study was that non-participation students would have lower self-concept scores. The data provided by Phillips showed no evidence of support for this hypothesis. He concluded that variables other than the activity program at the high school were instrumental in the development of self-concept. (It is interesting to note that Phillips failed to mention what these other variables were.)

Unfortunately, the structural weaknesses of the Phillips's study make it impossible to generalize his findings to any population other than his own. Rather

than searching for interrelationships between his variables, Phillips assumed that the relationship existed and that it was such that high-frequency participants would have high self-concept scores and that low-frequency participants would have low self-concept scores. Phillips also did not provide any extensive theoretical base for his assumptions nor for the necessity for examining the casual relationship he assumed between participation and self-concept. By not mentioning what "other variables" influenced self-concept, he demonstrated that he failed in his review of literature to establish any relationship between other variables and those included in his study.

In short, the limited sample as well as the lack of a good design (Phillips simply ran a frequency distribution study based on his assumptions) showing little theoretical support indicate that although his findings are interesting, they do not meet the challenge set forth by Rehberg in his request for a study of the influence of self-concept as an intervening variable with participation.

Despite calls such as Rehberg's for investigation into the self, little empirical research has been done. According to Wylie (1961), this lack of information has been due to the control that behaviorism has exerted throughout the 20th century in American psychology. After 1949 some research was begun because the behaviorists could not fully account for the "self" which most psychologists found in their subjects.

Today one finds the Educational Index and the index to Psychological Abstracts replete with works on self-concept and self-esteem. Unfortunately, most researchers use such a narrow field, e.g., "self-concept and third-grade reading," that one rarely finds useful information that can be used to aid school-side decisions. To avoid these pitfalls, this study attempted to analyze self-concept in a larger scope than had been previously attempted.

Study Design

This study was an ex post facto field study that examined the main and interactive

relationships among five independent variables and three dependent variables. The five independent variables were self-concept, membership in a specific high school curriculum track, academic achievement, sexual classification and grade classification. The dependent variables were participation in the total school activity program subdivided into participation in the school athletic activity program and participation in the non-athletic activity program. The general hypotheses expressed in substantive terms were that the five independent variables would be significantly correlated with each of the dependent variables.

The independent variable dealing with student self-concept was taken from the Tennessee Self-Concept Scale (Fitts, 1965) and yielded eleven sub-scales measuring various aspects of the total self-concept. These were defined as follows:

> Total Positive (P) Score--reflects the overall level of self-esteem. Persons with high scores tend to like themselves, feel that they are persons of value and worth, have confidence in themselves, and act accordingly. People with low scores are doubtful about their own worth, see themselves as undesirable; often feel anxious, depressed, and unhappy; and have little faith or confidence in themselves.
>
> Physical Self--presents the individual's view of his body, his state of health, his physical appearance, skills and sexuality.
>
> Moral-Ethical Self--describes the self from a moral-ethical frame of reference--moral worth, relationship to God, feelings of being a 'good' or 'bad' person, and satisfaction with one's religion or lack of it.
>
> Personal Self--reflects the individual's sense of personal worth, his feeling of adequacy as a person and his evaluation of his personality apart from his body or his relationship to others.
>
> Family Self--reflects one's feelings of adequacy, worth and value as a family member. It refers to the individual's perception of self in reference to his closest and most immediate circle of associates.
>
> Social Self--describes the "self as perceived in relation to others" category but pertains to "others" in a more general way. It reflects the person's sense of adequacy and worth in his social interaction with other people in general.
>
> Identity--presents the "what I am" terms. Here the individual describes his basic identity--what he is as he sees himself.
>
> Self-Satisfaction--describes how the individual feels about the self he perceives. In general this score reflects the level of self-satisfaction or self-acceptance.

Behavioral Self--comes from those items that say "this is what I do, or this is the way I act." Thus this score measures the individual's perception of his own behavior or the way he functions.

Self-Criticism--consists of 10 items taken from the L Scale of the Minnesota Multiphase Personality Inventory. These are mildly derogatory statements that most people admit as being true for them to some degree.

Instability (Variability)--provides a simple measure of the amount of variability or inconsistency, from one area of self perception to another.

Each student respondent received a score on each sub-scale as well as the Total Score; raw scores were used in the multiple regression analysis which was used to analyze all interactive effects examined in this study.

The independent variable of membership in a specific high school curriculum track was determined by examining each student's schedule. Each student was then assigned to a particular track (e.g., college prep) on the basis of the major subjects carried during the semester of the research.

The academic achievement variable was measured by the individual's class rank based on his grade point average. Each student's rank was converted to a percentile rating.

Students participating in the study were also dichotimized into male or female and identified as being a junior or senior grade level member.

The dependent variables were measured by a two-page activity checklist based on a format suggested by the National Association of Secondary School Principals in their booklet, The National Honor Society (See Appendix B). Each student received a Total Activity Score, an Athletic Activity Score, and a Non-Athletic Activity Score.

The following null hypotheses were examined:

$H_0 1$ There is no significant relationship between total positive self-concept, concept of physical self, concept of moral-ethical self, concept of personal self, concept of family self, concept of social self, concept

of self-identity, concept of self-satisfaction, concept of behavioral self, concept of critical self, concept of self-stability, curriculum track membership, academic achievement, sex, and grade and participation in the school total activity program.

$H_0 2$ There is no significant relationship between total positive self-concept, concept of physical self, concept of moral-ethical self, concept of personal self, concept of family self, concept of social self, concept of self-identity, concept of self-satisfaction, concept of behavioral self, concept of critical self, concept of self-stability, curriculum track membership, academic achievement, sex, and grade and participation in the school athletic activity program.

$H_0 3$ There is no significant relationship between total positive self-concept, concept of physical self, concept of moral-ethical self, concept of personal self, concept of family self, concept of self-satisfaction, concept of behavioral self, concept of critical self, concept of self-stability, curriculum track membership, academic achievement, sex, and grade and participation in the school non-athletic activity program.

Population and Methodology

The sample consisted of 459 high school students drawn from five central Pennsylvania high schools. They were sub-divided into the following groupings: 207 boys and 252 girls; 415 seniors and 44 juniors; and 138 college prep, 105 business, 107 general and 108 vocational-technical students.

All students completed the Tennessee Self-Concept Scale and the Student Activities Checklist. The high school provided information as to the class rank of the students included in the study. Materials for the research project were administered to all respondents by the researcher.

Statistical Application

Main effect hypotheses were analyzed by examining the significance of simple correlations. First and subsequent order interactions were analyzed through the use of stepwise linear multiple regression. Hypotheses were rejected at the .05 level of significance. Auxiliary data derived from the subscales was examined by using the same methods. Means and standard deviations were also calculated to aid in explanation.

Examination of the Specific Hypotheses

H_{0} 1 The Interaction of the Independent Variables and the Subscales of the Tennessee Self-Concept Scale and the Total Activity Score-Table 1

Step	Variable	R	F-Ratio	Increase in R per step
1	Track	.5192 **	168.654	----
2	Social Self	.5442 **	95.955	.0250
3	Grade	.5608 **	69.585	.0166
4	Rank	.5788 **	57.184	.0180
5	Identity	.5882 **	45.982	.0094
6	Moral Self	.5930 **	38.794	.0048
7	Sex	.5831 **	33.197	.0001

(** Mult R significant at the .01 level)

This multiple regression table illustrates the rejection of Null Hypothesis 1 (H_{0} 1). The most influential independent variable was membership in a curriculum track--far more college preparatory students participated in all areas of activities than did those enrolled in the other curriculums surveyed in the study.

The variance contributed by the self-concept measure was related to three subscales--the Social Self, the Identity Scale and the Moral-Ethical Self. The Social Scale, which reflected the student's sense of adequacy and worth in his social interaction with other people (Fitts, 1965), was the largest contributer among the self-

concept scales. The Identity Scale, which described how the individual saw himself, and the Moral-Ethical Self, which reflected the student's own estimate of his moral worth and his feelings of being "good" or "bad" (Fitts, 1965), were also among the independent variables accounting for the variance in the dependent measure. Together these three scales delineate a psychological profile of those students who participated in the activity program as a whole: They were students who were at ease in the social give-and-take that would be found in organizational activities, students who held a well-defined image of their personalities, and students who were secure in their own value systems as to what comprised right and wrong.

When examining Table 6 of this paper, one can find that five scales of the self-concept measure correlate significantly with the Total Activity Score: The Total Positive Scale ($r = .20$), the Moral-Ethical Self ($r = .21$), the Social Self ($r = .24$), and Identity Scale ($r = .27$), and the Behavioral Scale ($r = .23$). However, when incorporated into the regression equation with the other independent variables, only three of the scales contributed significantly: The Total Positive and the Behavioral Scales were dropped (see below "Composite Picture") as not being good predictors of the Total Activity Score; this was partially due to the correlations among the self-concept independent variables.

By viewing the complete correlational matrix (Appendix C), one can see illustrated the first major finding of the study: The contributions of the various measures of self-concept were highly independent of the variance contributed by the other independent variables. For example, the Social Self subscale correlated highly with the other measures of self-concept (Identity, $r = .70$; Moral Self, $r = .54$), but there were no significant correlations between the Social Self and the other independent variables in the regression equation (Track, $r = .16$; Grade, $r = .08$; Rank, $r = .16$; Sex, $r = .07$).

Grade classification made a surprisingly strong contribution since the complete

correlational matrix showed an r of only -.04 between the variable and the Total Activity Score: A small number of juniors was included in the study to check for a change in the level of participation across two grade classifications. Unfortunately, however, there were too few juniors included in the sample to allow for a detailed analysis of the appearance of this variable in the equation.

Academic achievement (Rank) was also added to the equation. The relationship between this variable and student participation was expected because of the results of previous research. The relative contribution of Rank was small due to its high correlation with Track (r = .47).

Sexual classification did meet significance, but its contribution was very limited adding only .0001 to the Mult R coefficient. This small contribution illustrated the fact that participation along lines of sexual classification was not correlated with the Total Activity participation rate. This changed drastically when the total participation was divided into athletic and non-athletic activities (see below). The contribution of Sex to the equation was a surprise since the complete correlational matrix reported an r of only .16 between the variable and the Total Activity Score.

H_0 2 The Interaction of the Independent Variables and the Athletic Activity Score-

Table 2

Step	Variable	R	F-Ratio	Increase in R per step
1	Track	.3253 **	54.098	-----
2	Sex	.4270 **	50.848	.1017
3	Physical Self	.4487 **	38.233	.0217
4	Social Self	.4559 **	29.772	.0072
5	Rank	.4582 **	24.072	.0023
6	Grade	.4586 **	20.064	.0004
7	Behavioral-Self	.4588 **	17.180	.0002
8	Personal Self	.4589 **	15.010	.0001

(** Mult R significant at the .01 level)

This second regression table supported the rejection of Null Hypothesis 2 ($H_0 2$). As in the first equation, track membership was the most influential independent variable accounting for variance in the dependent measure, in this case, the Athletic Activity Score. The relationship was not as strong as that which had been reported for the Total Activity Score. The lower magnitude of the relationship (an r of .33 instead of .51) may be traced to the fact that while mostly college preparatory students participated in the total activity program, students from all curriculums (mostly boys) took part in the various inter- and intra-scholastic sports teams. This cross-curriculum participation lowered the influence of track membership.

A surprisingly large contributor was Sexual Classification, since the complete correlational matrix showed an r of only -.16 between the variable and the Athletic Activity Score. This large contribution can be traced to the fact that boys reported large athletic scores while girls reported large non-athletic scores. This second step of the equation was most important when one considers the magnitude of the contribution of sex since the variable correlated at .32** with Track and at .26** with Rank (** r significant at the .01 level).

The self-concept measures contributed four significant correlations to the regression equation. When considered separately (see Table 6), four scales correlated significantly at the .05 level with the Athletic Activity Score (Total Positive Self, r = .20; Physical Self, r = .20; Identity, r = .21; Behavioral, r = .21). When included in the regression equation with the other independent variables, one scale (Total Positive) was dropped while two others (Personal Self and the Social Self) were added: These new scales had failed to reach the .05 level of significance when correlated with the Athletic Activity Score. (Personal Self-Athletic Activity Score, r = .18; Social Self-Athletic Activity Score, r = .17). (See "Composite View and Conclusions.") The various scales of the self-concept measure gave a good psychological description of the student who participated in the athletic activities of the school

program: He was a student who was very much satisfied with his physical appearance, health and condition, his physical skills and his general state of bodily development; he was quite prepared to deal with the social interaction which is so much a part of team sports; and he demonstrated a high level of satisfaction with his perception of his own behavior and his own evaluation of his personal worth apart from his physical status or his relationships with other people.

As in the first table, the contribution of the self-concept scales to the variance in the dependent variable score was independent of the contributions of the other independent variables. For example, the Physical Self was highly correlated with the other measures of self-concept found in the equation--Social, r = .41**; Behavioral Self, r = .62**; Personal Self, r = .57** (** r significant at the .01) The Physical Self, however, was not highly correlated with the other independent variables (Track, r = .06; Sex, r = .13; Rank, r = .06; Grade, r = .14).

As predicted by earlier studies, academic achievement (Rank) made a contribution to the multiple regression coefficient. As indicated in Table 1, the low contribution of the variable was due to its high correlation with Track.

Grade classification made a significant but small contribution. This was unexpected since Grade correlated at only .03 with Athletic Activity Score in the complete correlational matrix. As had been stated in the previous section, it would not be wise to speculate as to the correlation concerning the variable since the sample of juniors was so small.

$H_0$3 The interaction of the Independent Variables and the Non-Athletic Activity Score-Table 3.

Step	Variable	R	F-Ratio	Increase in R per step
1	Track	.4508**	116.544	----
2	Sex	.5042**	77.732	.0534
3	Grade	.5486**	65.306	.0444
4	Rank	.5755**	56.195	.0269
5	Social Self	.5803**	46.005	.0048
6	Total Positive	.5858**	39.348	.0055
7	Moral Self	.5877	33.986	.0019

(**Mult R significant at the .01 level)

This third regression table allowed for the rejection of Null Hypothesis 3 (H_0 3). Once again, track membership ranked first as the most influential independent variable in relationship to the dependent measure, in this case, the Non-Athletic Activity Score. The relationship was stronger than that reported for the Athletic Activity table; this can be traced to the fact that many typical non-athletic activities parallel membership in curriculum tracks: German Club, Calculus Club, etc., and the fact that many non-athletic activities--yearbook, newspaper, or student government offices--relate to courses contained in the college preparatory schedules and require specific grade point averages for participation; these GPA's are usually held by college prep students.

The contribution of Sex was quite large due to the number of girls who participated in the non-athletic activities. Very few boys received high non-athletic scores; they concentrated on the athletic activities (see previous section).

Grade was again included; however, as with the athletically related table, little commentary can be made because of the small sample of juniors included in the study.

The contribution of academic achievement (Rank) was again reflective of previous research. The contribution was low due to the correlation of the variable with Track.

The self-concept measure contributed three significant correlations to the regression table. As in the previous two hypotheses, support was found for the first important finding of the study--the self-concept measures accounted for variance in the dependent measure independently of that contributed by the other independent variables. In this table, the Total Positive Score correlated with the other self-concept scales: Social Self, $r = .80$ **; Moral-Ethical Self, $r = .78$**;(** r significant at the .01 level); however, the Total Positive Score was not correlated significantly with the other independent variables: Track, $r = .15$; Sex, $r = -.05$; Grade, $r = .14$; Rank, $r = .17$.

As illustrated in Table 6, only one scale, Identity, reached a significant correlation with the Non-Athletic Activity Score; however, when included in the regression equation with the other independent variables, this scale did not reach a level of significant contribution; however, three other self-concept scales were added. This phenomenon which appeared in each regression equation was discussed in the next section, "Composite View and Conclusions."

The three scales which contributed to the Non-Athletic Score variance provided a psychological description of the student who chose to participate in this area of the school activity program: The student was one who had a high estimate of his own self-concept; he was prepared to mix socially in the groups who attended these activities; and he was confident of the value of his personality from the ethical point of view.

The Composite View and Conclusions

Tables 5 and 6 illustrate the second important finding of this study: measures of self-concept related to student participation in a differential relationship--different areas of aspects of self-concept related in different magnitudes to different types of participation in the school activity program.

Tables 4 and 5 indicated which aspects of self-concept contributed to different types of participation: For Total Activity participation, the Social Self, Identity, and the Moral-Ethical Self were contributors; for Athletic Activity participation, the Physical Self, the Behavioral Self and the Personal Self reached significance in the regression table; and for Non-Athletic participation, the Social Self, the Total Positive Score and the Moral-Ethical Self were important.

A second facet of this differential contribution can be noted by reviewing Tables 1, 2, and 3: Although the same aspect of self-concept may contribute to the variance of the dependent variable, the contribution is not equal across the different classifications of that dependent variable. For example, the Social Self was the only

Table 4

Multiple Regression Correlations for all Significant Variables and Participation in School Activities

A

Relationship Between Significant Predictor Variables and Participation in the Total School Activity Program

Step	Variable	Mult R
1	Track	.5192
2	*Social Self	.5442
3	Grade	.5608
4	Rank	.5788
5	*Identity	.5802
6	*Moral-Ethical Self	.5803
7	Sex	.5831

B

Relationship Between Significant Predictor Variables and Participation in Athletic Activities

Step	Variable	Mult R
1	Track	.3252
2	Sex	.4270
3	*Physical Self	.4487
4	*Social Self	.4559
5	Rank	.4582
6	Grade	.4586
7	*Behavioral Self	.4588
8	*Personal Self	.4589

C

Relationship Between Significant Predictor Variables and Participation in Non-Athletic Activities

Step	Variable	Mult R
1	Track	.4508
2	Sex	.5042
3	Grade	.5486
4	Rank	.5755
5	*Social Self	.5803
6	*Total P.	.5858
7	*Moral-Ethical Self	.5877

*Indicates an aspect of self-concept

Table 5

Predictive Rank Order of Variables
Relative to Activity Participation

Variable	Total Activity	Athletic Activity	Non-Athletic Activity
Track	1	1	1
Sex	7	2	2
Grade	3	6	3
Rank	4	5	4
Total Positive	-	-	6
Social Self	2	4	5
Moral-Ethical Self	6	-	7
Physical Self	-	3	-
Behavioral Self	-	7	-
Personal Self	-	8	-
Identity	5	-	-

Table 6

Correlations of Various Self-Concept Scales with the Dependent Variables

Variable	Total Activity	Athletic Activity	Non-Athletic Activity
Total P.	.20*	.20*	.11
Physical Self	.14	.20*	.03
Moral-Ethical Self	.21*	.12	.19
Personal Self	.13	.18	.03
Social Self	.24*	.17	.19
Identity	.27**	.21*	.20*
Behavioral Self	.23*	.21*	.14

* r significant at the .05 level

** r significant at the .01 level

aspect of self-concept which reached significance in each regression table; however, it raised the Mult R of the Total Activity Score .0250 whereas, it contributed only .0072 to the Athletic Mult R and .0048 to the Non-Athletic Mult R. The Moral-Ethical Self contributed .0028 to the Total Activity Mult R, nothing at all to the Athletic Mult R and .0019 to the Non-Athletic Mult R.

Additional support for this view of differential contribution can be found in Table 6, in which all scales of the Tennessee Self-Concept Scale which reached significance with the dependent variables were given. For example, the Total Positive Score met the .05 level of significance for the Total Activity Score and for the Athletic Activity Score, but it did not reach significance with the Non-Athletic Score. Yet, in the regression tables, when the Total Positive Score was included with the other independent variables, it was dropped from significance with the Total Activity and the Athletic Activity Scores, and was added to the table for the Non-Athletic Scores. In the same manner, the Social Self reached correlational significance at the .05 level only with the Total Activity Score, yet when considered with the other variables, it reached significance with all three regression tables. The reader may reexamine Tables 1, 2, and 3 as well as Table 6 to study this differential rate of contribution with the other scales of the Tennessee Self-Concept Scale.

A third important finding of this study was that the differences between the correlations of an independent variable with two dependent variables (Athletic and non-Athletic Scores) were also significant at the .05 level. For example, the Physical Self correlated at .199 with the Athletic Activity Score and at .028 with the Non-Athletic Score. Submitting these correlations to the t statistic designed to determine the significance of difference between "dependent" correlations, i.e., correlations taken from the same population (Bruning and Kintz, 1968), the t statistic for the difference between these correlations was 2.82 (a t of 1.96 was necessary for significance at the .05 level and 2.576 for the .01 level) which indicated the strength

of the differential contribution of the Physical Self to athletic and non-athletic participation.

When submitting the correlational differences between the independent variables and the Athletic and Non-Athletic Scores, the following information can be reported:

For Track, the correlational difference between athletic and non-athletic participation was .126 which yielded a t of 2.409 (significant at the .05 level). This can be expected since track membership accounted for a smaller amount of variance in the Athletic Activity regression equation.

For Sex, the correlational difference was .516 which yielded a t of 9.18 (significant at the .01 level). This can also be expected since boys generally participated in athletic activities while girls usually selected non-athletic activities.

For Academic Achievement (Rank), the difference in the correlations between athletic and non-athletic participation was .210 which yielded a t of 3.73 (significant at the .01 level). This was expected since non-athletic activities usually required high grade point averages for participation and the fact that many of the non-athletic activities--band and chorus--were populated by those types of students Coleman would call members of the high school "leading crowd"--students, especially girls, who were college prep, good students, and participants in the social sub-groups of the high school. Participation in team sports activities did not carry grade point average requirements.

In regard to the self-concept, the significant Physical Self correlational difference (see above) can be expected since participation in non-athletic activities would not require the satisfaction with one's physical development which would be required for participation in the physically more demanding athletic activities. In addition, the Personal Self exhibited a correlational difference of .141 which gave a t of 2.32 (significant at the .05 level), and the Satisfaction Scale showed a correlational difference of .143 (a significant t of 1.42 at the .05 level), both

of which show the differential nature of the influence of self-concept on participation in the school activity program.

These findings illustrate the third important finding of the study: the differential nature of the contribution of independent variables is not limited to self-concept measures; on the contrary, it can be extended to the independent variables of Track, Academic Achievement, and Sexual Classification. The difference for Grade Classification was not significant at any level.

A fourth finding of this study deals with the relationship between self-concept and the frequency of participation in activities by high school students. In this respect this study did not support the findings of the Phillips' (1969) study. He concluded that non-participants did not have lower self-concept scores than participants. This study examined the means of the Total Positive Score of the Tennessee Self-Concept Scale for high and low frequency participants in the three dependent variable categories--total activity, athletic and non-athletic participation. The t statistic to determine the significance of mean differences was calculated along the lines suggested by Popham (1973).

For those participants in the Total Activity program those who scored above 100 (participated in at least 2.5 major activities) were listed as high frequency participators; those who scored 30 or below (participated in less than one major activity) were classified as low frequency participators. The mean of the Total Positive Self-Concept Score for the high participators was 346.267 (n = 146): the mean of the Total Positive Self-Concept Score for low frequency participators was 331.670 (n = 173). Applying the t test, the t statistic was 4.05** (** p significant at the .01 level). This indicates that a significant difference does exist in the total self-concept between high and low frequency participants--the opposite of that discovered by Phillips.

For the Athletic Activity Score, students who obtained a score of 80 or higher

participated in at least two major sports) were classified as high frequency participators: students who obtained a score of 30 or less (participated in less than one major sport) were classified as low-frequency participators. The mean of the Total Positive Self-Concept Score for high frequency participators was 350.684 (n = 76); the mean for the Total Positive Self-Concept Score for low frequency participators was 332.799 (n = 289). Applying the t test, the t statistic was 4.26. Again, the significant difference at the .01 level in Total Self-Concept shows results contradictory to those stated by Phillips.

For the Non-Athletic Activity Score, students who obtained a score of 80 or higher (participated in at least two major activities) were classified as high frequency participators; students who obtained a score of 30 or less (participated in less than one major activity) were classified as low frequency participators. The mean for the Total Positive Self-Concept Score for high frequency participators was 345.494 (n = 91); the mean for the Total Positive Self-Concept Score for low frequency participators was 335.003 (n = 268). Applying the t test, the t statistic was 2.52** (** p significant at the .05 level). This significant mean difference would not support Phillips' statements as to the differences in self-concept for high and low frequency participators.

Clearly, these statistics indicated that not only was there a difference in the self-concept scores of high and low frequency participators, but that this difference is significant for all three categories of student activities. The findings lead one to question the results of Phillips' study.

A fifth finding of the study was that large numbers of students do not participate in the extra- and co-curricular activities of the school: for the Total Activity Score of 30 or less (non-participation in only one major activity), there were 173 students, 37.6 percent of the total sample. When the figures were then broken down into athletic and non-athletic activities, the rate of non-participation soared: for Athletic Activity Scores of 30 or less (non-participation in one major sport), the student number was 289, 62.9 percent of the total sample; for Non-Athletic Scores of 30 or less (non-

participation in one major activity) there were 268 students, 58.3 percent of the total sample. All three figures illustrate low participation rates for the sample.

The sixth, and most important finding of the study was the light shed on the Rheberg hypothesis (1969).

Although this thesis did not examine self-concept as an intermediate variable between academic achievement and participation in inter-scholastic sports, it did establish the importance of self-concept in the relationship between academic achievement and participation not only in athletics but in non-athletic activities and the school activity program as a whole. One concern of this study was to expand the Rehberg thesis to non-inter-scholastic activities.

One need only examine the Table 2 included in the study to find the postulated relationship set forth by Rehberg--not only are academic achievement and participation related; there was a strong relationship between both and the scores the students obtained on four separate measures of self-concept when all the variables were included in the regression equation. By examining Table 6, one can find relationships significant at the .05 level between athletic participation and two additional measures of self-concept.

In addition to the relationship between self-concept and athletic participation, one can not deny the same type of relationship between self-concept and the activity program as a whole and the non-athletic activity program in particular. In effect, the basic hypotheses of this study examined Rehberg's postulate in areas beyond the narrow scope of inter-scholastic sports participation. Tables 1, 3, 4, 5 and 6 indicate research data which supports the application of the Rehberg thesis to areas other than inter-scholastic sports.

Educational or Scientific Importance of the Study

This study was one of the first in the field of school activities to combine psychological variables with previously researched personal variables to attempt to

answer questions raised by Rehberg in 1969. It produced psychological profiles of students who participate in school activities; it also dispelled the myth that school activities appeal equally to every student and that school activities are used by large numbers of students to complete their high school life experience.

The information provided by the study can be used by researchers to explore the area of student involvement in school life and by administrators to assess who participates in their programs as they try to measure the success or failure of tax dollars spent yearly to develop extra- and co-curricular programs.

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Appendix A

The Tennessee Self-Concept Scale

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Counselor Recordings and Tests

Box 6184, Acklen Station

Nashville, Tennessee 37212

Appendix B

The Yarworth Student Activity Checklist

Name, Last	First	I.	Grade	M or F

Check one of the following: ___College Prep: ___Business

___General ___Vocational-Technical

Please indicate the activities in which you have participated during the last calendar year. If you have participated in more than one activity in the same category, please list each separately. Example: "Interscholastic Sport. Team Member--Football and Baseball."

Category V (Score 50 points for each activity)

Class Officer

Head Cheerleader

Band Officer

Yearbook Official (Editor's level--specify position)/Newspaper Editor

Student Council Officer

Team Captain, Interscholastic Sport (for full season)

Category VI (Score 40 points for each activity)

Cheerleader

Bandfront Captain

Technical Award

Library Aide

Student Council Senator (Elected from class at large)

Guidance Aide

Newspaper Staff

(cont.)

(Category IV) cont'd.

Band Member

Chorus (List various organizations)

I. U. Student Forum Representative

Interscholastic Sport Team Member (on team full season or injured)

Secretarial Aide

Category III (Score 30 points for each activity)

Class Committee (for prom or class promotional sale, i.e., Easter Candy Sale, etc.)

Bandfront

Play Cast Member

Student Council Homeroom Representative

Category II (Score 20 points for each activity)

Club President

Intramural Team Captain

Back Stage Crew-Plays

Category I (Score 10 points for each activity)

Club Member

Intramural Sports Team Member

Open Category: List any school-related activity in which you have participated during the past year.

Appendix C

Complete Correlational Matrix of All Variables

GR	1.00	,21*	.21*	.15	-.14	-.14	-.16	-.12	-.06	-.08	-.11	-.14	-.10
SX		1.00	.32**	.26**	-.05	-.13	.06	-.12	-.06	.07	.04	-.15	.00
TR			1.00	.47**	.15	.06	.21*	.07	.09	.16	.21*	.03	-.19
RK				1.00	.17	.06	.23*	.08	.12	.16	.21*	.03	.20*
TP					1.00	.72**	.78**	.84**	.76**	.77**	.88**	.87**	.89**
PH						1.00	.58**	.57**	.40**	.41**	.67**	.64**	.62**
ML							1.00	.58**	.50**	.54**	.70**	.68**	.71**
PL								1.00	.55**	.64**	.71**	.77**	.77**
FL									1.00	.49**	.69**	.68**	.67**
SL										1.00	.70**	.65**	.73**
ID											1.00	.62**	.76**
SA												1.00	.66**
BE													1.00

LEGEND

GR= Grade
SX= Sex
TR= Track
RK= Rank
TP= Total Positive Self-Concept Score
PH= Physical Self-Concept Score
ML= Moral-Ethical Self-Concept Score
PL= Personal Self-Concept Score
FL= Family Self-Concept Score
SL= Social Self-Concept Score
ID= Identity Self-Concept Score
SA= Self-Satisfaction Self-Concept Score
BE= Behavioral Self-Concept Score

*Significant at the .05 level

**Significant at the .01 level

(Cont.)

Appendix C (Cont.)

Complete Correlation Matrix of All Variables

	SC	IS	AS	AA	NA
GR	.05	.07	-.04	.03	-.08
SX	-.07	.08	.15	-.16	.36**
TR	-.01	.01	.52**	.33**	.45**
RX	-.05	-.10	.38**	.17	.38**
TP	-.13	-.26**	.20*	.20*	.11
PH	-.06	.11	.14	.20*	.03
ML	-.11	-.23	.21	.12	.19
PL	-.12	-.26**	.13	.18	.03
FL	-.17	-.28**	.08	.13	.01
SL	-.04	-.14	.24*	.18	.19
ID	-.08	-.07	.27**	.21*	.20*
SA	-.12	-.39**	.06	.12	-.02
BE	-.15	-.21	.23	.21*	.14
SC	1.00	.22*	.06	.06	.03
IS		1.00	.05	.04	.04
AS			1.00	.72**	.78**
AA				1.00	.14
NA					1.00

LEGEND

GR= Grade
SX= Sex
TR= Track
RX= Rank
TP= Total Positive Self-Concept Score
PH= Physical Self-Concept Score
ML= Moral-Ethical Self-Concept Score
PL= Personal Self-Concept Score
FL= Family Self-Concept Score
SL= Social Self-Concept Score
ID= Identity Self-Concept Score
SA= Self-Satisfaction Self-Concept Score
BE= Behavioral Self-Concept Score
SC= Self-Cricitism Score
IS= Instability (Variability) of
AS= Total Activity Score
AA= Athletic Activity Score
NA= Non-Athletic Activity Score

* Significant at the .05 level

** Significant at the .01 level